

BELLCOMM, INC.

SUBJECT: Apollo Saturn Mechanical Panel
Meeting, February 24, 1966
Case 330

DATE: March 1, 1966

FROM: T. L. Powers

MEMORANDUM FOR FILE

An agenda for the eleventh meeting of the Mechanical Panel is attached. Principal items of interest were:

1. MSC has determined that some local areas in the SLA and CSM are slightly (3-4%) underdesigned for the loads specified in MSFC memo R-P&VE-SL-65-37. These loads are less than recent MSFC estimates using revised F1 engine thrust values at S-IC cutoff. Calculation of revised loads is under way at MSFC now. The impact on the spacecraft must then be determined.
2. The effect of S-II retro rocket plumes on CSM coatings and the need for boost protective covers over the radiators will be determined by SC 012 flight test.
3. MSC has provided estimates of propulsive venting from the LEM on flights 206 and possibly 207. The venting is small and will have little effect unless several hours of attitude control is required.
4. The weights subpanel (D Marmann, MSFC) reported that new preliminary reference trajectories are based on estimated vehicle weights -- not control weights. Higher residuals in the S-IVB will result from this approach.
5. NAA tests of ordnance for SLA separation reveal a high g, high frequency shock wave propagated through the structure which may cause momentary relay contacts, etc. No bad effects are expected in the CSM, but effects on the IU must be determined.

T. L. Powers

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TENTATIVE AGENDA FOR THE ELEVENTH MECHANICAL PANEL MEETING
TO BE HELD AT MSFC, BUILDING 4610, ROOM 2083, FEBRUARY 24 & 25, 1966

1. Review of previous Action Items MSFC/MSC
2. Review of Action Items ~~from~~ other Panels MSFC/MSC
3. Review of Action Items to other Panels MSFC/MSC
 - a. Request for radiation environment to I&C Panel *R Gauss*
4. Reports from Subpanels
 - a. Weights (Marmann) MSFC
 - b. ICDs (Kraus) MSFC
5. Report of other actions since last meeting MSFC/MSC
6. Status of Sub-Critical Storage Zero G Package for AS-203 MSC/MSFC
7. Status of Hazardous Gas Leak Detection System (Eudy) MSFC/MSC
8. Status of TV System on AS-202 MSC/MSFC *MSC to complete draft*
9. Dynamic Test
 - a. BP-27 SM replacement by June 15, 1966 MSC
 - b. LTA-2 replacement by June 15, 1966 MSC
 - c. LTA-2 replacement configuration and designation MSC
 - d. Inertial Measurement Unit (IMU) in CM MSC
 - e. Test Data MSFC
 - f. Return of SM Inspection GSE (SLING) MSC
10. Structural
 - a. Vibration Test Criteria for Apollo Spacecraft (Memo from I-DIR to MP, November 18, 1965) MSFC/MSFC (Furman)
 - b. Environmental design and test requirements and procedures for LEM (Detailed presentation) MSC
 - c. Torsional Stiffness of SC (GJ) MSC
 - d. Dynamic Load Analysis Status MSC/MSFC (Furman)
 - e. Modulus of Elasticity of Apollo Spacecraft versus Flight Time MSC

- f. SC/IU/S-IVB Forward Skirt Compartment
 - (1) IU Sublimator test results MSFC (Isbell)
 - (2) LEM Waterboiler Exhaust MSC
 - (3) LEM Cabin O₂ Exhaust MSC
 - (4) SC Burst Pressure for S-IVB Forward Skirt
Panel Flutter Study MSC
- g. Increased loads from F-1 engine thrust increase MSFC (Furman)
- h. Space Vehicle Safety Factors MSC/MSFC
- 11. Shock on LV from SLA Petal Deployment MSC/MSFC
- 12. Exchange of Contractor Documentation MSFC/MSFC
 - a. Materials Reports Exchange
 - b. Other Documentation Exchange
- 13. Review of Panel Membership
 - a. KSC Member(s) with ICD Signature Authority KSC
- 14. Items from Floor
- 15. Tentative date and location of next meeting

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